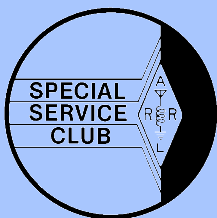




The Raleigh Amateur Radio Society's **EXCITER**

GET INVOLVED

- RARS General Membership meeting: Second Tuesday of the month.
- The RARS net meets every night except Saturday @ 8 p.m. on 146.640.
- The RARS Technical & Trader's net: Saturdays @ 8:00 PM on 146.64.
- ~~RARS meets for a monthly dinner on the First Tuesday of each month.~~



PUBLIC SERVICE EVENTS

Interested in helping? Visit
<https://www.rars.org/public-service.php>

frequently for our 2021
ham public service
schedule.

RARS General Meeting

Main Topic: New FCC RF Safety rules

Presenter: Chuck Till, K4RGN

Date: August 10, 2021

Time: Meeting at 7:30 PM, informal
gathering at 7PM on Zoom.

Where: Zoom

RARS Net Monthly Summary

July 2021, 32 nets

541 checkins

1214 minutes

Julie Royster KT4JR

RARS net manager

RARS Monthly Dinner to resume in August

[Click Here for info](#)

RARS Officers

PRESIDENT

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N8ZU
919.417.2477
jfh49@bellsouth.net

VICE PRESIDENT

Tom Lewis
N4TL
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TREASURER

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The Raleigh Amateur Radio Society

The Raleigh Amateur Radio Society, Inc. (RARS) was founded in 1969 and continues to serve and support the amateur radio community in the greater Triangle area. In 1999, the society incorporated a new RARS and obtained 501(c)(3) non-profit tax status.

The objectives of the club are to promote worldwide friendship through amateur radio; to be of public service by providing radio communications in times of disaster, emergency, or civic needs; to educate members in radio technique, and to provide training classes to assist in obtaining amateur radio licenses.

Anyone interested in amateur radio is eligible to apply for membership. Dues for regular licensed amateurs are \$18 per year (from July 1 through June 30). Additional immediate family members pay \$5 each per year. Dues for licensed amateurs older than 59 or younger than 16 are \$12 per year. Dues for non-licensed associate members are \$9 per year. Applications for membership may be obtained from the treasurer or on the RARS website.

<https://www.rars.org>

Exciter

The Exciter is the official newsletter of the Raleigh Amateur Radio Society. It appears each month as a PDF on the RARS website at www.rars.org. Members receive email notification when the latest version is available. Please provide your email address to the Treasurer.

The Exciter welcomes articles, advertisements, and other contributions. To submit a piece to the newsletter, please contact the Editor. The Editor reserves the right to edit any and all pieces. The submission deadline for each month's Exciter is the Saturday that is ten days before the general meeting. All submissions must be final. Drafts are not accepted.

The views expressed in the Exciter are those of the individual authors and do not necessarily reflect the views of the Editor or RARS.

Tom Lewis, N4TL, editor (editor@rars.org)

For Your Information

RARS General Meeting

Date: Second Tuesday of each month

Location: Ridge Road Baptist Church 2011
Ridge Road Raleigh, NC, 27607

Time: People begin arriving at 7 p.m. The
meeting officially begins at 7:30 p.m.

RARS Monthly Dinner

All members and guests are welcome to the monthly (first Tuesday) RARS Supper, 6:30PM, at the CHOW Pizza Bar 8311 Creedmoor Rd, Raleigh, NC. CHOW is behind McDonalds at the intersection of Creedmoor Road and Brennan Drive. We go to the back left in the restaurant. Their private room holds 30-40 and the table layout is flexible. Informal and Dutch, just bring your appetite and best rag to chew.

RARS Repeaters in Raleigh

145.130, 146.640 and 444.525

Join us for the nightly RARS net at 8 p.m. on the 146.640 repeater. All hams holding a Technician class license or higher are invited to check in. We welcome both RARS and non-RARS members to the net.

There is a net Listing on the RARS web-site click here. <https://www.rars.org/nets.php>

VE Testing

The RARS VEs will accept walk-in testing in February, May, August and November at 5:30PM, prior to RARS membership meetings at Ridge Road Baptist Church; the RARSfest in April; the Cary Swapfest in July; the JARS-Fest in November; and following RARS license classes. Please bring a photo ID, your original and a copy of your current license, your \$14 exam fee, and any valid CSCEs that prove passing elements beyond that of your current license. Visit <https://www.rars.org> for more information.

RARS Birthdays

Darrell	KN4ZYA	08/08
Hertz	KN4CUZ	08/10
Eric	NR4O	08/10
Andy	AA9P	08/10
Manny	K4KBM	08/14
Aaron	KN4ORB	08/14
Jake	KO4DFF	08/15
Christopher	KM4RNC	08/15
Denny	KO4IBL	08/17
Bernard	W4BRB	08/17
Mike	KM4BJV	08/18
David	W4EIP	08/18
Bonnie	KK4OAK	08/19
Chuck	W3WZN	08/19
Al	KE4IHX	08/20
Randy	KI4BRZ	08/20
Mike	KN4DRN	08/21
Barry	KD4WTI	08/22
Steve	N4BTS	08/22
Steve	KJ4BX	08/23
Hal	K4NKR	08/24
John	KG4AKV	08/25
Peter	KJ4MDY	08/25
Dave	KO4FKA	08/26
Jeremy	K2HJX	08/26
Jeff	NW4Z	08/29
David	KN4QT	08/29
Mike	KK4ETS	08/30
Dan	KD4AGQ	08/31

New Members

Joe Zajac	K4JIMZ
Nick Atkins	K9RDU
Nathan Atkins	KO4RUB
Michael Nye	KG5AWR

July 13, 2021 RARS meeting

The meeting was held on Zoom, as we have been since the covid-19 pandemic started. Many members connected from 7 PM on. Vice President Tom Lewis, N4TL, ran the formal part of the meeting. See the meeting minutes on [page 33](#) for details. After the formal part of the meeting Bill Morine, N2COP, Vice Director – Roanoke Division, introduced our speaker. Carl Luetzelschwab, K9LA,



ARRL Central Division Vice Director Carl Luetzelschwab, K9LA.

Introduction to HF Propagation

Carl Luetzelschwab K9LA

e-mail: k9la@arrl.net

website: <https://k9la.us>

After the presentation Carl send the entire presentation to RARS.

Hank put it on the RARS website. You can access it from the home page.

<https://www.rars.org>

Or here.

PDF of June Meeting Program:

[Intro to HF Propagation](#)

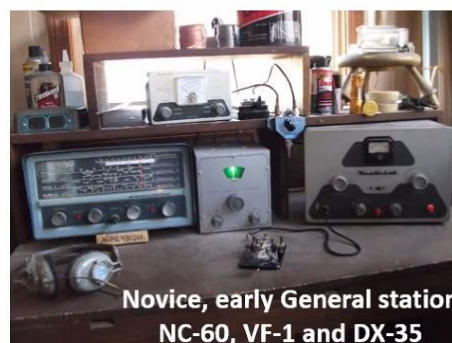
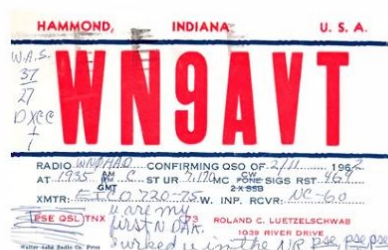
Presented by K9LA - Carl Luetzelschwab

<https://www.rars.org>

July 13, 2021 RARS meeting

Who Is K9LA?

- Novice in October 1961
 - General in May 1962, Extra in 1977
- Enjoy
 - Solar and propagation topics
 - Playing with antennas
 - DXing
 - Contesting (mostly casual now)
 - Fixing and using vintage equipment
 - Traveling to hamfests and conventions
- Purdue graduate (electrical engineer)
- Active duty at Picatinny Arsenal (northern NJ)
- Early days – CFI-AI, owned Cessna 170B (1634D)
- RF design engineer by profession (now retired)
 - Motorola in Schaumburg, IL and Ft Worth, TX
 - Magnavox/Raytheon when we moved back north in 1988
- Wife is Vicky AE9YL (first licensed as KB5EAM in 1987)



A Caveat - What We're Trying to Do

- We're trying to simplify very complicated atmospheric/ionospheric processes into simple statements about HF propagation
- This kind of works most of the time
- Here's what we have trouble with
 - Predicting the day-to-day variability of the ionosphere
 - Our propagation predictions are not daily predictions
 - Predicting even shorter-term enhancements

General Characteristics of the Regions

- F region (roughly 150-400 km)
 - Highest in altitude – gives the longest hops
 - Highest electron densities – best for the higher bands (15m, 12m, 10m)
 - F₂ region most important for our long distance QSOs
- E region (roughly 90-150 km)
 - Shorter hops due to lower altitude
 - Can block signals from getting to the F region
- D region (roughly 60-90 km)
 - A detriment to propagation due to absorption (loss)

Raleigh ARS - July 2021 - K9LA

When Are the Bands Open?

- Lower bands (160m, 80m, 60m, 40m) best at night
 - When ionospheric absorption in the D region minimizes
- Middle bands (30m, 20m, 17m) generally okay day and night
- Higher bands (15m, 12m, 10m) best during the day
 - When the MUF is highest
- 6m propagation via the F₂ region best at solar max in fall/winter
 - Don't forget sporadic-E in the summer
- The higher bands (15m, 12m, 10m) “follow the sun” during the day
- Digital modes have an advantage over SSB and CW
 - This solar minimum will go down in history as the most active on the higher bands due to the digital modes

July 13, 2021 RARS meeting

Lots of Websites With Data

- NØNBH banner (his website is <http://www.hamqsl.com/solar.html>)
 - at <https://www.qrz.com/> and many other places
- Dr. Tony Phillips
 - at <https://spaceweather.com/>
- Space Weather Prediction Center (SWPC)
 - at <https://www.swpc.noaa.gov/>
- VE3EN
 - at <https://www.solarham.net/>
- WX6SWW videos by Dr. Tamitha Skov
 - at <https://www.spaceweatherwoman.com/>
- Other general websites and many others that are more specific

Propagation Right Now

- We're just starting to see Cycle rise
- 160m, 80m – local QSOs during the day, NVIS at night, domestic and worldwide QSOs at night (need good station!)
- 60m, 40m – local QSOs during the day, domestic and worldwide QSOs at night
- 30m, 20m, 17m – worldwide and domestic QSOs during the day and early evening
- 15m, 12m, 10m – occasional north-south QSOs during the day
- Digital modes will provide more opportunities
- Watch for better propagation on the higher bands this fall and winter due to the change in the atmosphere and Cycle 25's rise

Come on, Cycle 25!



July 13, 2021 RARS meeting, continued

 TN Tom, N4TL, Raleigh (Co-host, me)	 DW dennis wz0q	 L- Larry - K4LBX - Raleigh
 Mark - KM4JRH - Raleigh (Host)	 DK Denny KO4IBL	 LJ Lee Johnson
 CK Carl K9LA (Co-host)	 Dick KD4ISC	 Lowell K4EUP Wendell
 BN Bill N2COP Wilmington	 DA Doug AD4UL Erie,PA	 Mike KK4ETS Cary
 MK Mike KN4DRN	 DN Doug N3LTV Raleigh NC	 MN Mike N9MDS
 KL K4BYN Louis	 EN Ernie N4AEW	 NB NC1X Bob Raleigh
 Tadd (KA2DEW) Raleigh	 Greg KE4PAX - Maryland	 RK Rich, K7RLH, Apex
 AG AJ4YA. Grady	 H- Hank - K4HM - Michigan	 RN Richard N1FUA Apex NC
 AS Al Sutton-N4EII	 HC Hugh Cashion KD4WJD	 RS Rob Sullivan AK4CA Raleigh
 AA Alan AB4OZ	 JK Jerry KE4TTS Cary, NC	 Roy KT4EM
 AW Allen WA2GMI Raleigh	 JK Jim KM4WRK, Raleigh	 SK sam. KN4RWI, Raleigh
 BK Bob K4RLC	 JW Jim w1xr	 SJ Steve Jenkins W4MGT
 BN Bob. N4GEB	 Joe Zajac K4JMZ Cary, NC	 Tadd (KA2DEW) Raleigh
 BW Bruce W8TWT RDU	 JN John, NC4JP Raleigh, NC	 T- Tom - K2UCU - Cary, NC
 Carl W8WZ, Garner, NC	 JK Julie KG7LZZ Remote (MT)	 T- Tom - NC4TS, Lake Royale NC
 CK Charles, KM4AMT, Raleigh	 JJ Just Joe - K4HEW - NC	 VN Virginia NC4VA
 CK Chuck K4RGN Raleigh	 L- Larry - K4LBX - Raleigh	 W WA4OSS-Charles
 CK Cliff KA7NSU Cary	 KJ K2HJX- Jeremy Lindsley	 AK AD4GX ken
 CW Curt W4CP Smithfield	 KD KD4KXI Daniel	

RARS Zoom Meeting 56 Participants

Future RARS Meeting Topics

Titles, topics, and speakers **subject to change.**

8/10/2021	New FCC RF Safety rules	Chuck Till, K4RGN
9/14/2021	Wind turbines, solar power & traditional ways of generating electricity	Brian Henderson, VE6ZS Calgary, Alberta, Canada
10/12/2021	RARS Officers nominations & NCPACKET, a several-county-wide only-on-ham-radio social network.	Election committee & Tadd Torborg, KA2DEW
11/9/2021	RARS Officers election and Show and Tell	Election committee & members
12/14/2021	RARS Officers induction & Meteor Scatter	Zach Thompson, KM4BLG Asheville, NC

During the Zoom meetings please keep your microphone muted.

Please edit your name so your Name, Call and Location are shown.

The next few meeting of RARS will be held using Zoom at 7:30PM. Zoom is a conferencing application that runs on computers, tablets and phones. The meeting ID will be sent out to everyone via email.

Quick start guide for new Zoom users

https://support.zoom.us/hc/en-us/articles/360034967471-Quick-start-guide-for-new-users#h_b0c98dfa-d90f-486d-9617-71ab7b41a273

Zoom help center

<https://support.zoom.us/hc/en-us>

RARS-L - The RARS Email List

Notice: The RARS-L Terms of Service have been updated.

RARS is now using the rars-l-email-list (email reflector) as the primary method of distributing club-wide information including the Exciter, Meeting notices, and other information deemed important for all members. The email list is still available for forum or group discussion type email. The RARS-L is adopting the following configuration:

- **All RARS Members are automatically subscribed to the email list**
- **ONLY RARS Members are allowed to subscribe to the rars-l email list**
- **Each subscribed email address must be the same as the shown in the member profile**
- **A semi-automatic audit will assure the subscribed email address matches the member profile**

Each member has an individual password allowing them to set the following options for their RARS-L subscription:

- **MAIL Delivery Enabled/Disabled:** If disabled, rars-l emails will not be sent to your email address ***Note-1**
You can still send email to the list
You can read the email archives by logging into the RARS-L server
- **Digest Mode:** Will send all posts in a single email each day (if there were posts).
- **Monthly Password Reminder:** Sends a PLAIN TEXT email showing your password each month ***Note-2**
- **Avoid Duplicate Copies:** If a post is sent to the list and a copy to you then only one copy is sent to you.

To request your password via email, or to login and change your password or options, you can go to the [RARS Mail List info page](#) and scroll to the bottom of the screen. Note that passwords in email are sent as plain text. After receiving a password via email, you should immediately log in to the RARS-L and change your password.

***Note-1:** "Disabled" could cause you to miss important information sent to all members via the RARS-L. This option is not recommended since typically there have been only 2 or 3 emails posted per week and having to delete so few emails is not worth the risk of missing important information.

***Note-2:** To avoid the risk of an intercepted plain text password you can leave this "OFF". You can always get your password sent as PLAIN TEXT from the [RARS Mail List info page](#).

If you have questions or need help regarding the rars-I Email List contact webmaster@rars.org

So - WHAT IS the rars-I mail list?

A "Mail List" sometimes called a List Server, or Mail Reflector, is basically the same thing as an email "group" in your email address book - but much bigger, and shared by all addresses that are on the list.

Any mail you send to rars-I@lists.deltaforce.net will be sent to each email address on the list (subject to any optional limitations the recipient has set on his subscription). Since all RARS members are automatically subscribed to the list, this makes it easy to broadcast information, questions, requests, etc. to the entire club membership.

You control what rars-I email you receive and how you receive it, by setting your subscription options. If you want to receive ALL RARS email notices and subscriber submissions individually you don't need to do anything.

If you DO NOT want to receive all submissions, or you want them sent in "Digest mode, you will need to set some options. If you turn off all delivery options you can still read emails by going to the archives on the server at rars-I list information page and click the rars-I Archives link near the top of the page. The archives "Read Only" so browse around all you want - you can't hurt anything there.

That's probably more than most users need or want to know - BUT:

If you want to dig into the techy details, read below.

There are 2 ways you can control your options:

1. You can go to the server at lists.deltaforce.net/mailman/listinfo/rars-I and log in at the bottom of the screen, then select from a list of options to change.
2. You can email commands to the server at rars-I-request@lists.deltaforce.net.

You can get a list of commands and how to use them by sending a blank email to:

rars-l-request@lists.deltaforce.net with just the word help as the subject and no signature or text of any kind in the message body.

When using email, multiple commands can be sent - one per line (the Subject of the email is read as the first command). If you are changing an option you must send an "authenticate" command prior to sending a change of any kind.

Here are some examples:

(Note: you only need to authenticate once - before the first command that makes a change. The your-password should be replaced with YOUR actual password. Where more than one command is required, the additional commands should be in the body/text of the email, one command per line.)

password	Get your password via email.
set show	Show your current option settings
authenticate your-password set delivery off	Turn off mail to your subscription.
authenticate your-password set reminders off	Stop monthly password reminders.
authenticate your-password set digest on	Receive digests rather than individual emails.
authenticate your-password set delivery on Set reminders on set digest off	Get individual emails and monthly reminders but no digests.

If you want to dig still deeper into technical details,

see the [GNU Mailman website](https://www.gnu.org/mailman/).

RARS Membership links

Use the following link to verify / update your membership profile.

<https://www.rars.org/userprofile.php>

Use the following link to renew your membership.

https://www.rars.org/membership_renewal.php

HAM RADIO LUNCHEON

Everyone is welcome!

Every Thursday at 11:30 am

New York Diner, 909 McKnight Drive Knightdale.

The location may change, check the AB4OZ entry in
QRZ.COM for the current location

Hamfest Calendar

For details go to <http://www.arrl.org/hamfests/search>

[Fayetteville, NC August 14](#)

[The Shelby, NC Sept. 3 - 5](#)

[Winston Salem, NC Oct 16](#)

These links were copied from AB4OZ's QRZ entry.

Alan keeps updating the information.

<https://www.rars.org>

Contesting Tips from W8UA

The July/August issue of the National Contest Journal (NCJ) contains a column titled "Next-Gen Contesters" written by teenage tester Javan Miller, W8UA. Javan was licensed at age 12 and enjoys CW contesting and rag chewing. His NCJ article details how he uses the spectrum display available in N1MM Logger+ to maximize his search and pounce contest scores using his station's attic antennas. It's an informative article for testers of any age. Well done, Javan!

The National Contest Journal is available electronically to ARRL members at no cost. It can be accessed on iOS, Android, and Amazon Kindle devices using the ARRL Magazines app.

Upcoming Events

Aug 22	ARRL Rookie Roundup Contest - RTTY 6hr contest, 100W max. More info at http://www.arrl.org/rookie-roundup .
Oct 15-17	Jamboree on the Air Join other Scouts on the air. More info at https://www.scouting.org/international/jota-joti/jota/ .
Oct 18-22	ARRL School Club Roundup Contest Open to individuals, clubs, and school groups. More info at http://www.arrl.org/school-club-roundup .

PSE Send Us Photos!

Please send photos (with a caption) of youth "playing radio" to Brantley K4CBW (k4cbw@arrl.net) for inclusion in the Exciter. Whether operating, building, or otherwise assisting, we'd love to see youth in action!

Technician License Question

Here's a question that could appear on a Technician license exam.

What do the initials LEO tell you about an amateur satellite?

- A. The satellite battery is in Low Energy Operation mode
- B. The satellite is performing a Lunar Ejection Orbit maneuver
- C. The satellite is in a Low Earth Orbit
- D. The satellite uses Light Emitting Optics

Find more questions at: https://hamexam.org/flash_cards/15-Technician

General License Question

Here's a question that could appear on a General license exam.

Approximately how long does it take the increased ultraviolet and X-ray radiation from solar flares to affect radio propagation on Earth?

- A. 28 days
- B. 1 to 2 hours
- C. 8 minutes
- D. 20 to 40 hours

Find more questions at: <https://hamexam.org/exam/16-General>

Technician License Answer: C. The satellite is in a Low Earth Orbit
General License Answer: C. 8 minutes

13 Colonies on the Air special event

By Carl W8WZ

Each year Amateur Radio operators celebrate American Independence with the 13 Colonies on the Air special event. Each of the original 13 states assembles a team of operators and procures a special 1x1 call sign starting with “K2”. North Carolina’s team uses the call K2J. During the period from 1 July to 7 July, amateurs around the world try to work each of the special K2 Stations on the air. Working all 13 is called getting a “clean sweep”. Additionally, there are bonus stations in England, France and one honoring William Penn in the state of Pennsylvania. Each state has its own special QSL card each year. People who work the states can send an SASE to get the special QSL card. Folks who earn a clean sweep can order a certificate as well. In addition, vendors sell items such as coffee cups that bear the call sign of the person buying the coffee cup that have images of the different states QSL cards on the cup. Contacts can be made on any band or mode. Most take place on HF using either SSB, CW or other digital modes. However, this year, all of the 13 states were also active on Satellites as well.

Three members of RARS are part of North Carolina’s K2J team. Namely: Mark KM4JRH, John KG4AKV and Carl W8WZ. This year we were contacted by a local ham named Nick whose call is KI4QHM. Nick asked if we planned to operate as a group in a public setting as K2J, and if so could he come by and join in the fun. We had never considered doing that before. In the past, each K2J operator simply worked from his or her home. But, we thought this was a good idea. So on Monday, 5 July we gathered at Saint Christopher’s Episcopal Church in Garner and set up a station. We installed a homebrew end fed half



Nick KI4QHM, John KG4AKV, Chuck K4RGN, Bob N4GEB

wave antenna as an inverted L in some of the tall trees on the church's property and ran coax across the parking lot into the fellowship hall. In the comfort of the air conditioning we set up an ICOM 706 station and got on the air as K2J. John also brought his Icom 9700 satellite station. We operated from 10 AM until 3 PM and we made 177 contacts that day. We made contacts over HF using SSB and CW and we made contacts over the satellites using both SSB and CW.

KG4AKV is an experienced satellite operator but had never made a CW contact. W8WZ is an experienced CW operator but had never made a satellite contact, so the two worked together to make their first CW satellite contact. John worked the radio and Carl worked the key and they got 2 QSOs in the log that way.

We had several folks stop by to visit and operate including: Mark KM4JRH, John KG4AKV, Carl W8WZ, Chuck K4RGN, Bob N4GEB, David W4OFO and Nick KI4QHM. Additionally, a few members of the church stopped by throughout the day and got a look at ham radio and enjoyed seeing it. A great time was had by all.

The K2J team set a record for our overall contacts, making more than 20,000 QSOs. Each of the 13 states have a friendly competition to see which state makes the most contacts each year. In 2018 North Carolina won and that year our QSO total was 14,840 so we set a new record for ourselves this year and it was fun to include a day of group activity as part of that total.



John KG4AKV, Mark KM4JRH, David Burt W4OFO, Nick KI4QHM

Of all the 13 States, North Carolina's team K2J won the Top State award making more QSOS than any of the other states.

CQ POTA, CQ POTA, CQ POTA!

Ken Castille, KN4GUS

Many of you may have heard the call when scanning the bands but have you ever thought about venturing outdoors to activate a park? If you enjoy the aspects of amateur radio on Field Day, you'll equally enjoy doing a POTA (Parks on the Air) activation. I exclusively do portable operations with my radio and while I've setup outside near my home for field days, special events or regular ops, I wanted to explore the option of taking my gear to a park to participate in POTA.

The idea of amateur radio in parks was brought to the forefront in 2016 when the ARRL wanted to help the National Park Service celebrate their 100th anniversary and encouraged amateur radio operators to promote the parks and show amateur radio to the public. The event was widely accepted and shortly after, a non-profit Parks on the Air organization

(parksontheair.com) was formed to continue encouraging Hams to venture out into the Parks.

Awards are given out to Hams for their activations and there is a Facebook group where members can publish their activation pictures and stories. While the event started with National Parks, the organization now recognizes State Parks to include recreation areas, wildlife management areas and state game lands among others but does not include any City or County parks. The excitement of the initial U.S. event has spread to Canada, Europe and Japan where POTA activity is gaining traction.



As I mentioned, I personally do all portable ops. I recently went out to William B. Umstead State Park on Wednesday, July 17th and did a POTA activation with a couple of non-hams and had a really fun time. After checking in with the Park Office, I took out my Yaesu FT-891, LDG-100 tuner, Bioenno 12V-30ah LiFePo battery and my Buddipole antenna and set up in a small clearing near one of the parking lots. I had posted on the POTA website that I would be operating from 1430-1730 hrs. UTC to help spot me for any “hunters” searching for a POTA call. I didn’t have to wait long. The frequency got hot quick. In the first 90 minutes, we got 59 contacts! I actually

had to deal with mini-pileups to sort through all the stations trying to call in. We ended our time with 108 contacts total and had a blast. I had so much fun, I couldn’t wait to head out to another local park.

On Saturday, July 24th, after a breakfast meetup with some Ham friends, I took my gear and headed to Clayton, NC and the Clemmons Educational State Forest for a solo activation. I wasn’t disap-

<https://www.rars.org>

pointed. I checked in with the Park Office again and started talking to Kevin, one of the Forest Rangers. I gave him an information sheet on POTA and invited him to come out to see how the operation is done. During his lunch break, he came out and sat with me while I went on and on about POTA, ham radio, propagation, solar weather, Q-codes, etc. and he was very interested, even expressing he might want to get licensed. I ended the day with 54 contacts with stations as far away as CA, AZ and NM – all with 100 watts in a forest!



As you can tell, POTA is a fun and exciting part of our hobby and I am already planning another POTA activation at some of the State parks around Cary and Apex. I encourage you to do *"POTA – Where every day is Field Day!"*

Review: West Mountain Radio Epic-H PWRgate

What does one do when one wants a battery backup for ham radio use? One can use an UPS, but that provides only a limited life, particularly when one is also using it to provide backup for a computer. What if one has a high capacity battery, especially if it is not suitable for an add-on to an existing UPS? That was the situation in which I found myself. I upgraded batteries in my camping trailer which left me with a 100AH LiFePO4 battery. The chemistry is incompatible with standard models of UPS which are made for Pb-Acid/SLA/AGM batteries.

The solution is the West Mountain Radio (www.westmountainradio.com) Epic PWRgate or Epic-H PWRgate. The only difference is in the orientation of the connectors. The Epic PWRgate is described in the manual as a "high power OR Gate with a built-in smart battery charger." Well, it is sort of a battery charger. One still needs a power supply. This connects to the power supply, the radio, the battery, and a solar panel if one is available. What it does is that it isolates the power supply and battery. If the power supply is on, it feeds the radio and provides up to 10A to charge the radio. If the power is off, the battery feeds the load. If a solar panel is present and the power is off, the



solar panel will charge the battery through the built-in MPPT charge controller. This means that solar panels without a controller can be used which can save money on that purchase. If the power supply or battery malfunctions, they are electrically isolated so power won't be sent to a malfunctioning device. Switching from power supply to battery for the radio is instantaneous. I have tested this and there was no apparent lag in switching over to battery.

Battery type (Gel Lead-Acid, Absorbed Glass Mat, or Lithium Iron Phosphate) and charging rate (1A, 5A, or 10A) are set by jumpers inside. If jumpers are removed, these can be set via a USB cable (provided). One can also run the downloadable WMR Diagnostics Utility. An optional temperature probe is also available that would allow one to set parameters for low and high charging temperature limits. The USB programming allows one to set other customized parameters which is good if one is using a battery of a different type than those listed already.

The Epic PWRgate is expensive, but for what it does, it is not out of line with other MPPT controllers that do not provide for separate power supply and solar input connections or for isolation of power and battery. Connections are made using standard PowerPole connectors which is also a difference between this and other MPPT controllers. There are PowerPole connection locks provided which can be inserted to lock the connections and ensure they won't pull out. If one is placing on a flat surface, rubber feet are included. Otherwise, the case has four holes for mounting to a surface with screws (not provided). A laminated quick reference card for the LED status indicators is also included. Warranty period is one year.

If you find yourself with a large battery and want a way to use it to power a transceiver, then this is a good choice. Up front it is expensive, but it will likely provide reliable service and provide for that emergency backup if needed.

73, Stephen, NY4NC

Free AB40Z Hamfest, Weather permitting

The free AB40Z HamFest will be Saturday, August 21, 2021. Setup at 9AM. Start time is 10AM. New location, Golden Corral Restaurant rear parking lot. 3551 Grenelle street, Raleigh NC 27603.

Check the latest information here [QRZ.COM](https://www.qrz.com).

Interesting information and items sent to the Exciter.

NANO-Vector Antenna Analyzer

From Chuck Littlewood, K4HF.

The Bilal Company has manufactured the ISOTRON Antennas for over 40 years. <https://www.isotronantennas.com/>

Their July newsletter explains how to use a NANO-Vector Antenna Analyzer to check your antenna. This link will take you to the newsletter.

https://isotronantennas.com/index.php?main_page=page&id=16



DX maps. Real time propagation maps.

<https://www.dxmaps.com/spots/mapg.php?Lan=E&Frec=MUF&ML=M&HF=N>

Real time digital propagation map. This one is handy to look at your own call after calling CQ. You can see how many stations are receiving you. You do need to wait a few minutes for your call to show up.

<https://pskreporter.info/pskmap.html>

DX cluster

https://en.wikipedia.org/wiki/DX_cluster

<https://dxheat.com/dxc/>

Real time lighting maps

<https://www.lightningmaps.org/#m=oss;t=3;s=0;o=0;b=0.00;ts=0;>

<https://www.rars.org>

ARRL Roanoke Division Website

<http://arrl-roanoke.com/>

Antique Automobile Club of America

Denny, KO4IBL, edits the newsletter for the local chapter of the AACA.

<https://www.aaca.org>

<https://www.ncregionaaca.com/triangle/>

License Classes

Online Ham Radio classes are being taught by kb6nu.

<https://www.kb6nu.com/study-guides/>

Thanks to Carl, W8WZ

Palomar Engineers RFI filters fixes RFI

2019 FD we all had generator RFI issues, from the large gensets and my Generac inverter model.

I ordered the RFI-GEN-1 kit and put four turns of the extension cord in the filter at each end. No complaints and it works great. Had a blast at FD and look forward to FD 2022.

AC/DC Generator RFI Noise Filter Kit = 1" ID - 2 filters, \$39.00.

<https://palomar-engineers.com/rfiemi-solutions/>

Thanks to James KE4DRN

EZNEC software

On Jan 1, 2022, Roy Lewallen, W7EL, the creator of EZNEC, will be retiring and putting EZNEC+ into the public domain.. Please see the announcement at:

<https://eznec.com/retirement.htm>

Kindest regards.

Kai, KE4PT

<https://www.rars.org>

Amateur satellite operation.

KG4AKV working a satellite on Harkers Island.

A very good video of the operation.

During the IOTA contest, John KG4AKV and I took a break to work the RS-44

Satellite pass from Harker's Island (FM14), N.C.

<https://youtu.be/8xg5VLrcttU>

Enjoy 73

Marc, W4MPS

The Yasme Foundation

By Tom Lewis, N4TL

I started chasing DX in 1979. At that time, I would occasionally work Lloyd, W6KG and Iris Colvin, W6QL. They travelled to many DX locations and received some financial support from the Yasme foundation. YASME was the name of Danny Weil's, VP2VB, 40-foot boat. He sailed the YASME from England to West Africa. Then to the British West Indies in 22 days in 1954. He met Dick Spenceley, KV4AA in the US Virgin Islands. He learned about ham radio got his license and would operate from various DX locations for many years. James D. Cain wrote a book, Yasme: The Danny Weil and Colvin Radio Expeditions. The book is out of print but can be downloaded free from the Yasme Foundation website.

Yasme book, <https://www.yasme.org/the-yasme-book/> .

It is a very interesting book to read.

This is from the Yasme Foundation website.

The Yasme Foundation offers a beautiful plaque to anyone who submits proof showing contacts with 30 different call signs of YASME officers, directors and/or operations. For proof of 60 contacts, a trophy in the shape of the sailboat "Yasme" is awarded. Eligible call signs are listed on the Yasme Awards Call Sign Directory page.

A number of years ago I thought I might have enough contacts for the first award. To find out I would have to go through all my QSL cards and logbooks. that is a big job. So I never checked. In 2010 I decided to enter all 14 paper logbooks into my computer. I also did many contest logs, I finished the project in July 2011.

<https://www.rars.org>

The YASME Award

Presented to **Thomas Lewis, N4TL**
for outstanding achievement in Amateur Radio

The YASME Foundation,
founded in 1961, promotes
HF amateur radio DXing
and DXpeditioning by
channeling resources to
projects which enhance
these activities.

Date: 05/21/2021

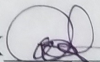
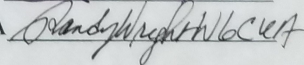


You have verified amateur
radio contacts with 30 or more
YASME officials and DX-Peditions.
We congratulate you on your
accomplishment.

Certificate #511

Yasme Foundation President Ward Silver, N0AX

Yasme Awards Manager Randy Wright, W6CUA

 N0AX
 W6CUA

Earlier this year I decided to see if I have enough QSLs for the award. To help find the contacts I wrote a program that would read my log data in an ADIF file and look for the Yasme call signs. It took me a few days to get the program to work correctly. The program took 0.6 second to run. It generated 402 call sign matches. I had to compare the dates and times to the Yasme list to see if there was a real match. I found that I had 74 valid calls and dates. The log said I have 53 conformations. I searched for cards and when I got to 34, I stopped looking. I know I would not make it to 60. I applied for 30 contact Plaque. It arrived July 19, 2021 and is number 511.

RARS Classifieds

Copied from <https://www.rars.org/classifieds.php>

The items below were listed within the last 30 days on the RARS website.

FOR SALE: TYT MD-9600 Dual-band DMR/Analog Mobile - \$160

Posted August 1st, 2021 by: KA9QJT

Contact: ka9qjt@hotmail.com

The radio has only been used in my shack and is very clean. It looks new and has just become redundant, so offering it locally before putting in on eBay. Large black on white LCD display. Holds 3000 channels VHF: 25W low, 50W high power UHF: 25W low, 45W high power. As a DMR radio, it will hold 100K IDs and supports promiscuous mode, which is helpful for monitoring multiple talkgroups from a hotspot or repeater, without actually having a specific channel programmed.

Updated with recent firmware version 6.009, which pairs with CPS version 1.23 for programming from your PC.

Has a solid local-area codeplug in it (NCPRN, hotspot examples, UHF analog repeaters), along with a recent set of the US DMR IDs. With purchase, I will program your DMR ID into the radio for immediate use.

Comes with the original box, user guide, mounting bracket, power cable, hardware, microphone and programming cable.

Brian - KA9QJT

Email at ka9qjt@hotmail.com, or text/call 919-609-4664.

Misc Ham Radio Gear

Posted July 31st, 2021 by: K4HF

Contact: k4hf@arrl.net

1. Kenwood Model TM-V7A 2 Mtr/440 MHz 50/35 Watt Mobile Transceiver. With mobile mounting bracket, mike, power cables and manual. Very good condition - \$195
2. Kenwood TH-77A 2 Mtr/440 5 Watt Handheld. Comes with a good battery, drop-in charger and speaker mike. very good condition - \$145
3. Diamond Model GZV4000 5V TO 15 VDC AT 40 Amps Continuous with built in speaker. Very good condition - \$135
4. Tektronix Oscilloscope Model 321. Turns on and has a trace. Triggering does not work. - \$15

RARS Classifieds continued

5. Heathkit Model V-7A Volt Ohm Meter - Meter moves, needs calibration - \$10

6. MFJ-1278 MultiMode Data Controller - works, with manual - \$20

7. Morse Brass St. Key on wood base with shorting bar - \$45

8. J-38 St. Key - \$35

9. Bag of 14 New PL-259 Coax Connectors - \$20

10. Bencher Single Lever Paddle - \$65

Contact me by e mail, preferably, or (919) 872-6555. Thanks, Chuck

ICOM IC-751 160 -10 Meter 100 Watt Transceiver

Posted July 31st, 2021 by: K4HF

Contact: k4hf@arrl.net

The IC-751 includes the built-in PS-35 AC Power Supply, manual, less mike, AC power cord and several optional filters CW and SSB filters. Tested OK. Good Condition - \$225. Contact me by e mail, preferred, or (919) 872-6555. Thanks, Chuck

Kenwood TS 480HX 160 - 6 Meters 200 watt Transceiver

Posted July 31st, 2021 by: K4HF

Contact: k4hf@arrl.net

The TS 480HX has a detached head for mobile/portable operation. The manual, mike and power cords are included. A strong current supply is required to obtain full output. Very good condition - \$675. Contact me by e mail, preferred, or (919) 872-6555. Thanks, Chuck

High Frequency Antennas for Beginners

Posted July 23rd, 2021 by: N4MQU

Contact: MarkGibson6822@gmail.com

RARS Classifieds continued

The public is invited to attend an introduction to high frequency antennas at Wendell United Methodist Church. The speaker will be Curt Phillips The workshop takes place on Saturday August 7 at 1:00 PM.

This one-hour workshop will be focused on HF (shortwave) antennas for those new to HF and those with space or other restrictions. Handouts with web links for additional information will be distributed. For details see the website <http://www.fivecountyhre.org/high-frequency-antennas-for-beginners/>

Thanks for reading
Mark Gibson

Baofeng UV-5R dual and HT

Posted July 17th, 2021 by: WZ0Q

Contact: wz0q@outlook.com

Have a Baofeng UV-5R dual band HT for sale. Comes with original box, manual, and all original accessories. Asking \$20.00 or OBO.

Call Dennis

919-413-5998

Or reply by email.

Wz0q.

Hallicrafters Super Skyrider

Posted July 15th, 2021 by: W4BOH

Contact: infomet@embargmail.com

You've been looking for a classic receiver, right? I have a neat Super Skyrider that needs to participate in my downsizing. If you actually want one you can turn on and listen to, this is it. It was worked over and had some external paint touched up by a serious collector in NM. I bought from his estate and don't know anything about him, but all the eight things I bought are in fine shape. Someday, you may want to buy one of my Pilot Wasps!

Anyhow, the Super Skyrider is hot and I've made several QSOs with it. Halli was bad about reusing names and it has no number, but I think it's much like an SX-16. The often lost plug in xtal filter is present and works. It's one of the few with variable BFO injection level. The chrome is great and the RX will look good

RARS Classifieds continued

on any operating table or display shelf. Are you sold? It's \$200, picked up in Hillsborough. I'll even deliver, if you are sure you want it and pay upfront! Of course you'll want a picture, so just email me at infomet@embarqmail.com and I'll send you one, or more. 73, Wilson, W4BOH

Anyone DMR radio and accessories for sale

Posted July 15th, 2021 by: KN1DKH

Contact: NCRetMan@Outlook.com

Anyone AT-D578UV III Tier II DMR digital radio. Tri-band. Never used – \$300

Full Duplex Receive (V+V,U+U&V+U) w/ two volume controls.

4 selectable TX power outputs

1.77 inch color TFT screen for Day or Night operation. User changeable display and font colors.

JetStream 30 Amp Switching Power Supply, JTPS32MAB - \$50

30 amp surge; 25 amp continuous

TRAM dual band mag-mount mobile antenna - \$20

Wake County No charge in-person amateur radio exams

Posted July 15th, 2021 by: N4MQU

Contact: MarkGibson6822@gmail.com

Saturday August 7, 2021 Central Carolina VE Team (CenCar) and Five County VE Team (FCVET) will be conducting no charge amateur radio exams in the Southern and Eastern Wake County area. CenCar will be testing at the American Legion Post 116, 6400 Johnson Pond Road, Fuquay Varina, NC 27526 at 10:00 AM. The Five County VE team (FCVET) will be testing at Wendell United Methodist Church, 129 N Main Street Wendell, NC 27591 at 2:30 PM. Walk-in licensed applicants or applicants with FRN and valid email addresses will be allowed. Do you work on the weekend and need a different date? No problem we can test by appointment at our Raleigh facility on Banks Road. Just check other on the registration form and make a comment what day of the week and time. We will work out a mutually agreeable schedule. Study tips, pre-test instructions registration and FAQ <http://www.fivecountyhre.org/study-tips-and-registration/>. Thank you de N4MQU

RARS Board Meeting Minutes

June 15, 2021
7:00 PM on Zoom

John Honeycutt – Present
Tom Lewis – Not Present
Greg Seamster – Present
Mark Kilmer – Present
Jeremy Lindsley – Not Present
Carl Davis – Present
Curt Phillips – Present
Chuck DeCourt – Not Present
Julie Royster – Present
Alan Pitegoff – Present
Tadd Torborg – Present
Ken Latchum – Present
Chuck Littlewood – Present
Brantley West – Not Present
Joe White – Present
Liz White – Not Present
Marty Young – Not Present
Richard Kroeger – Present
Hank Montgomery – Present

The meeting was called to order by John Honeycutt at 7:00 PM. A quorum was present and the April and May meeting minutes were approved.

Status of existing action items: – Mark Kilmer

Existing Action Items:

- Jeremy Lindsley:
Obtain quotes for new safety vests and report back to the board.
(Open)

RARS Board Meeting Minutes continued, June 15, 2021

Make announcements on the club meetings requesting volunteers for the PS events.

(Closed)

- Curt Phillips:

Contact Greg on budgetary requirements for Field Day.

(Closed)

Add an announcement to the RARS website and request the announcement be added to the Exciter next month. Send the announcement to the reflector list.

(Closed)

Add an announcement to the RARS website and request the announcement be added to the Exciter next month. Send the announcement to the reflector list.

(Closed)

Obtain quotes from food vendors.

(Closed)

- Hank Montgomery:

Fix repeater page link in website.

(Closed)

- Mark Kilmer:

Take control of the updated trustee QRZ page.

(Closed)

- Carl Davis:

Take control of the updated trustee QRZ page.

(Closed)

John Honeycutt:

Send out e-mail announcing the invitation to the JARS picnic.

(Closed)

New Business:

Discussion as to when we should resume meetings at the church.

RARS Board Meeting Minutes continued, June 15, 2021

Officer Reports:

- **Vice President - Tom Lewis, N4TL**
Next months club meeting will be a presentation on Field Day by Curt Phillips (W4CP).
- **Treasurer - Greg Seamster, KE4PAX**
Currently the club has 473 members. Reported cash assets, inventory and net income. Discussion of the budget draft line items for next year and the current budget.
- **Secretary - Mark Kilmer, KM4JRH**
No report

Committee Reports:

Public Service Director: **Jeremy Lindsley, KB4JDL**
No Report

Education Director: **Carl Davis, W8WZ**
No report

Field Day Chair: **Curt Phillips, W4CP**

Nancy Torborg will coordinate the snack and drink service.
Help is needed to maintain the generators.
Still need VHF/UHF station.

FM Repeater Chair: **Chuck DeCourt, W3WZN**
No Report

RARSfest Chair: **Vacant**
No Report

RARS Board Meeting Minutes continued, June 15, 2021

Exciter Editor:

Tom Lewis, N4TL

No Report

Food Service Chair:

Richard Kroeger, N1FUA

No report

Net Manager:

Julie Royster, KT4JR

Nightly nets are going well.

ARRL Liaison:

Chuck Littlewood, K4HF

No Report

Youth Director:

Brantley West, K4CBW

In absentia, John announced ARRL Kid's Day. For information, contact Brantley directly.

NC QSO Party Chair:

Marty Young, W4MY

No Report

RARS VE Coordinators:

Joe White, WA4GIR

Liz White, K04CK

Testing will resume in August. Exams will be given at the Cary swapfest.

RARS Webmaster:

Hank Montgomery, K4HM

Updated several pages. Hasn't received any information from club member, Devin Hedge, KN4FVH, in reference to the proposed creation of a new web site.

Trustee Chair:

Carl Davis, W8WZ

All licenses are up to date.

At Large Director:

Alan Pitegoff, AB4OZ

Planning a site survey on Friday. Received a new UPS. Mentioned that all new trustees obtain control of the respective QRZ pages.

RARS Board Meeting Minutes continued, June 15, 2021

At Large Director:

Tadd Torborg, KA2DEW

No Report

At Large Director:

Ken Latchum, AD4GX

Will be bringing a generator to FD.

Past President:

Carl Davis, W8WZ

No report

New Action Items:

Jeremy Lindsley:

- Send e-mail to the club list, asking for volunteers.
- Contact the Five County HAM Radio Enthusiasts

John Honeycutt:

- Take a cursory look at the membership application to help determine what modifications should be made to the questionnaire.
- Clarify the rules now in place with the church, in consideration of resuming "in-person" meetings.

Meeting Adjourned at 8:46 PM.

Next meeting date: July 19, 2021

Minutes respectfully submitted by,

Mark Kilmer (KM4JRH)

Secretary

Raleigh Amateur Radio Society

RARS Membership Meeting Minutes – July 13, 2021

7:30 PM on Zoom

The meeting was called to order by Tom Lewis at 7:29 PM.

The Pledge of Allegiance was recited.

Call for recognition of visitors, new members and license upgrades:

Tom invited any new members, visitors or those who recently received licenses or upgrades to introduce themselves.

Quorum call:

A quorum was present.

Minutes for June 2021 were approved.

Officer Reports:

President - John Honeycutt, N8ZU:

No report

Vice President - Tom Lewis, N4TL

The next BoD meeting will be one week from tonight. The program will be presented by Tadd Torborg(KA2DEW). The topic will be: NC Packet:TARPN (Terrestrial Amateur Radio Packet Network). **[Editors Note, this was changed after the meeting. The next presentation will be "New FCC RF Safety rules" by Chuck Till, K4RGN].**

RARS Membership Meeting Minutes continued

Treasurer - Greg Seamster, KE4PAX

Greg reported cash assets and inventory and Field Day expenses. The 2021-2022 budget was approved.

James Reynolds became a Silent Key on June 23rd.

Secretary - Mark Kilmer, KM4JRH

No report

Specific Announcements or Reports from Directors:

1. Director at Large – Alan Pitegoff, AB4OZ

Cautioned everyone, not to talk about being out of town on vacation on the nets. Noted upcoming events, and said to check his QRZ page for details. Announced the quarterly 10m net, coming up Saturday the 17th. Based on the approval of the Board of Director's, the monthly club dinner will resume.

2. Director at Large – Tadd Torborg, KA3DEW

Described TARPEN and invited interested people to contact him directly.

3. Youth Director – Brantley West, K4CBW

Announced the upcoming events for youth.

4. Field Day Chair – Curt Phillips, W4CP

Thanked all that participated in Field Day.

5. Education Director – Carl Davis, W8WZ

The fall technician class has been canceled. WCPSS has decided not to resume the Continuing Ed programs at this point. Recommended the classes available on-line.

RARS Membership Meeting Minutes continued

Floor Opened for Additional Announcements or Reports from Directors or Members:

Chuck Littlewood, K4HF

Reservations for the monthly club dinner have been made for August at Chow.

Tonight's Program:

Tom Lewis (N4TL), introduced Bill Morine, N2COP, who in turn introduced Carl for tonight's program

Meeting Adjourned at 8:51 PM.

Next meeting date: August 10, 2021

Minutes respectfully submitted by,

Mark Kilmer (KM4JRH)

Secretary

Raleigh Amateur Radio Society

RARS Monthly Dinner to resume in August - NEW LOCATION

RARS will resume monthly supper gathering on Aug. 3rd. at 6:30PM at Chow Pizza Bar 8311 Creedmoor RD, Raleigh, NC. CHOW is behind McDonalds at the intersection of Creedmoor Road and Brennan Drive. We go to the back left in the restaurant. Their private room holds 30-40 and the table layout is flexible.

All members and guest are welcome to the monthly (first Tuesday) RARS Supper. Informal and Dutch, just bring your appetite and best rag to chew.

[Jump back to page 1](#)